UCAR/CSU Introduction

Dr. Jack D. Fellows
GLOBE Interim Executive Director

Partner's Meeting
Croatia GLOBE Learning Expedition
June 29-July 4 , 2003

Why are we here?

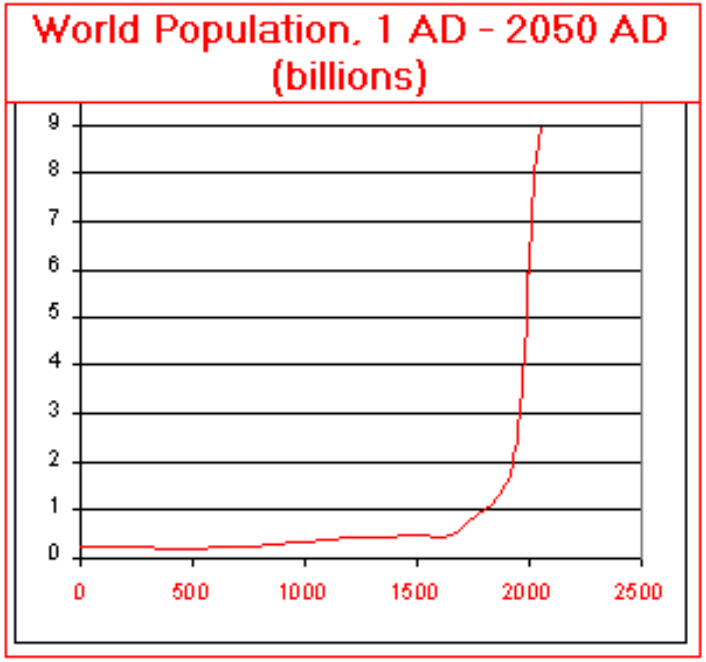
- Promote Environmental stewardship and research
- Enhance scientific literacy and train the next generation scientists and engineers
- Expand global civility
- Create visionary leadership

GLOBE contributes to all of these!

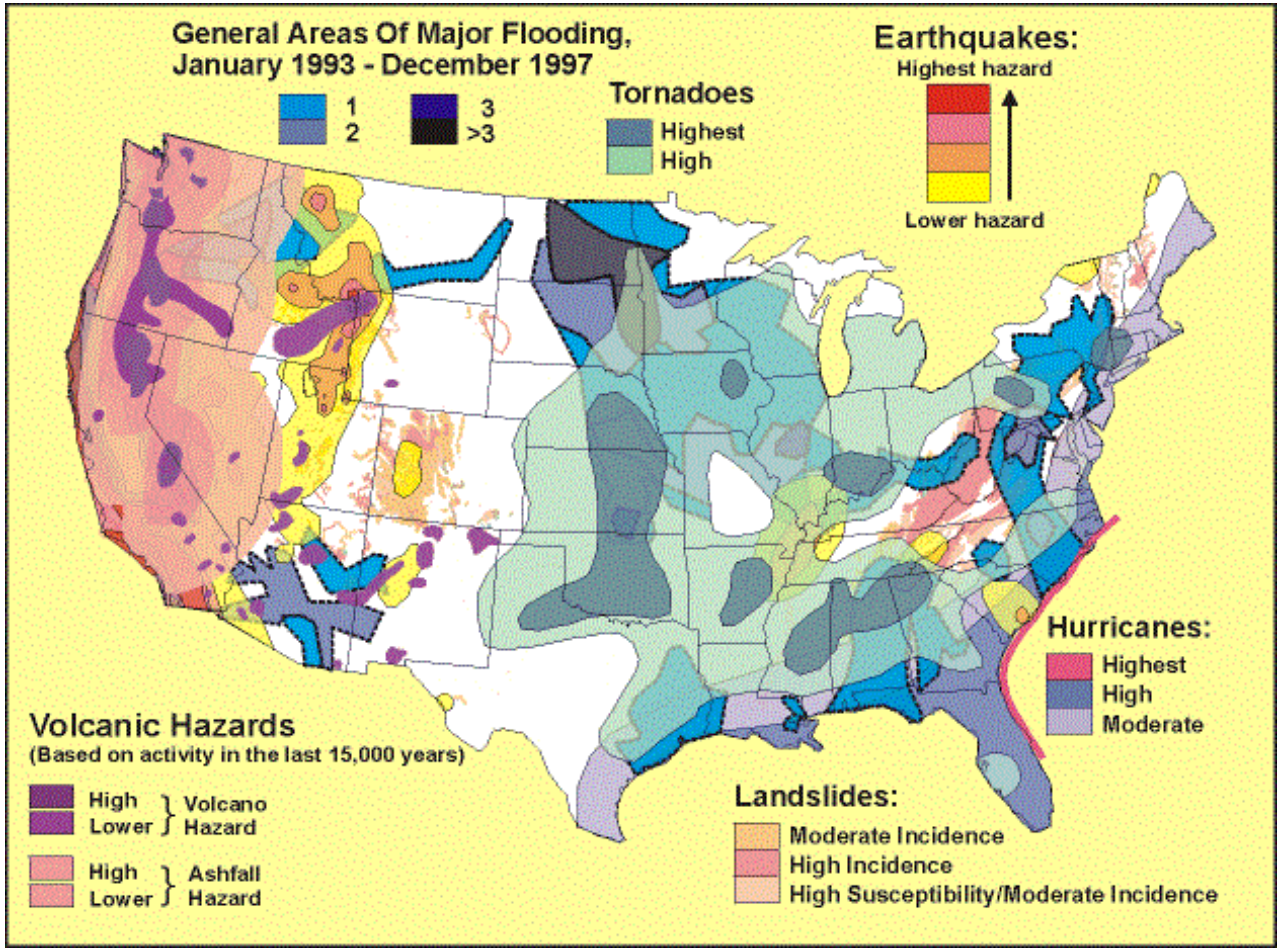
Why is the environment important?

In a short period of time…this world has seen significant:

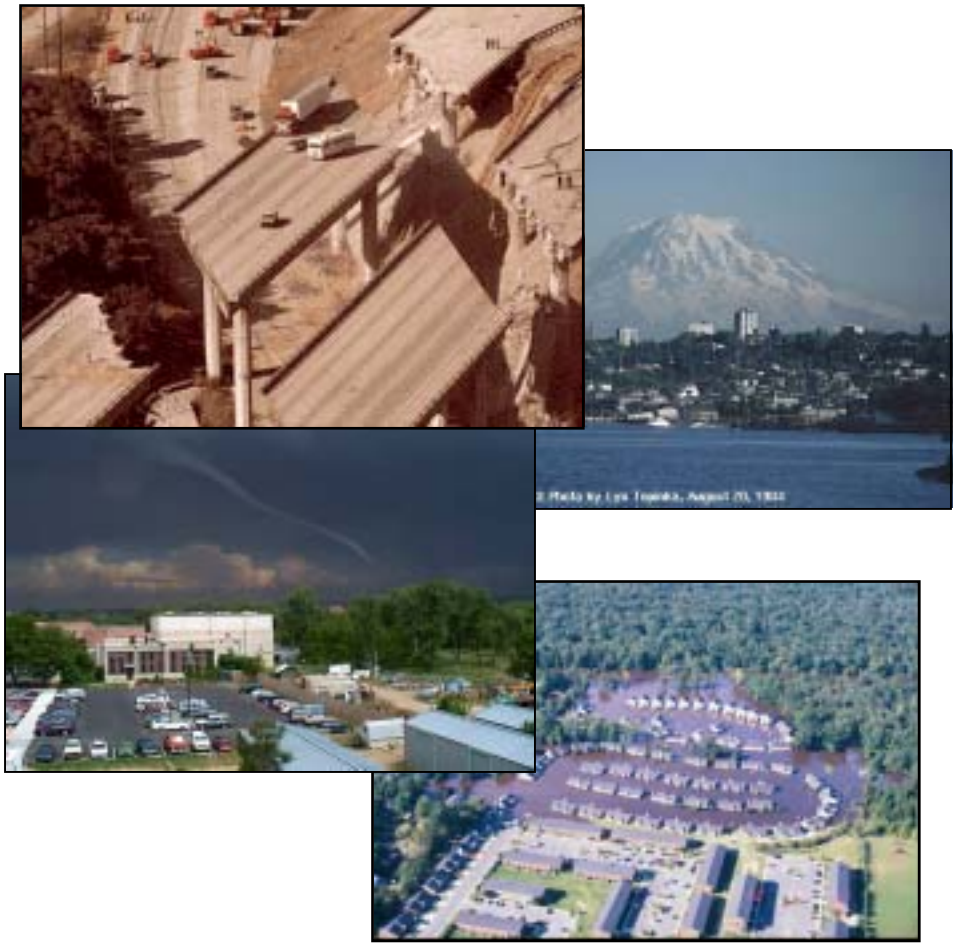
- population growth
- increases in per capita consumption of resources
- movement into areas vulnerable to natural and human hazards
- advances in science and technology that are both helpful and hurtful:
  - Better observing platforms, research advances, communication, computation, etc.
  - Stockpiles of dangerous materials in vulnerable structures and areas
  - Dependence on large scale infrastructure (pipelines, communications, road networks)



Plenty of Natural and Human Hazard Areas for People to Move Into!



The Results: we need to be concerned!



Do we still need to study the environment?

Few decades ago:

- assimilation capacity of the atmosphere is infinite
- climate is unchanging
- weather is unpredictable

Today:

- The capacity of the atmosphere is finite (locally, regionally, and globally)
- Climate can change abruptly
- *…and weather is more predictable than we'd thought…*

"Instead of just writing about capital, had Karl made a lot of it……..it would have been much better"

Karl Marx's Mother

"Too bad all the people who know how to run the country are busy driving cabs and cutting hair."

George Burns

Most people have an opinion about the environment! Through GLOBE, teachers and students not only have an opinion – but know what they are talking about and can take responsible and visionary action. Plus, they are contributing to scientific advancement.

Past and Future!

- History. UCAR/CSU have been involved in GLOBE for many years. Given the outstanding current GLOBE leadership around the world, we are confident that this transition will be successful.

- Future. After the transition is complete, plans for enhancing GLOBE activities will just be starting. We will be looking to you for input on our future together.

- Excited. Change can be unsettling, but we hope you are excited. We are! GLOBE has been very successful, but somewhat constrained within the US government. This is an excellent opportunity for us to create the “New” GLOBE together.

UCAR/CSU Introduction

- 16 June 2003. The UCAR/CSU team was selected by NASA to manage the GLOBE Program (US/Int) on 1 October 2003.
- Transition. Since February, we have been working with NASA and GLOBE staff on the transition (e.g. GLOBE training workshops, scientific investigations, U.S. Partner and Country Coordinator support, materials, website, help desk, and other functions).
- This transition cannot be successful without you. It has been wonderful to meet many of you this week! There is a lot to do – we need your patience during this transition.

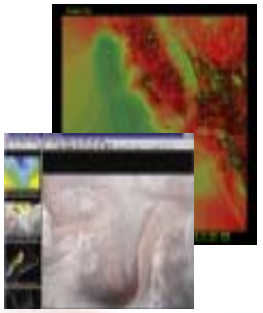
UCAR and CSU

- UCAR. UCAR is a non-profit corporation established 45 years ago to help 100+ universities undertake complex atmospheric and related science and education programs. See http://www.ucar.edu

- CSU. CSU is a major U.S. university founded in 1870 -- 24,000 resident students from 96 countries. See http://welcome.colostate.edu

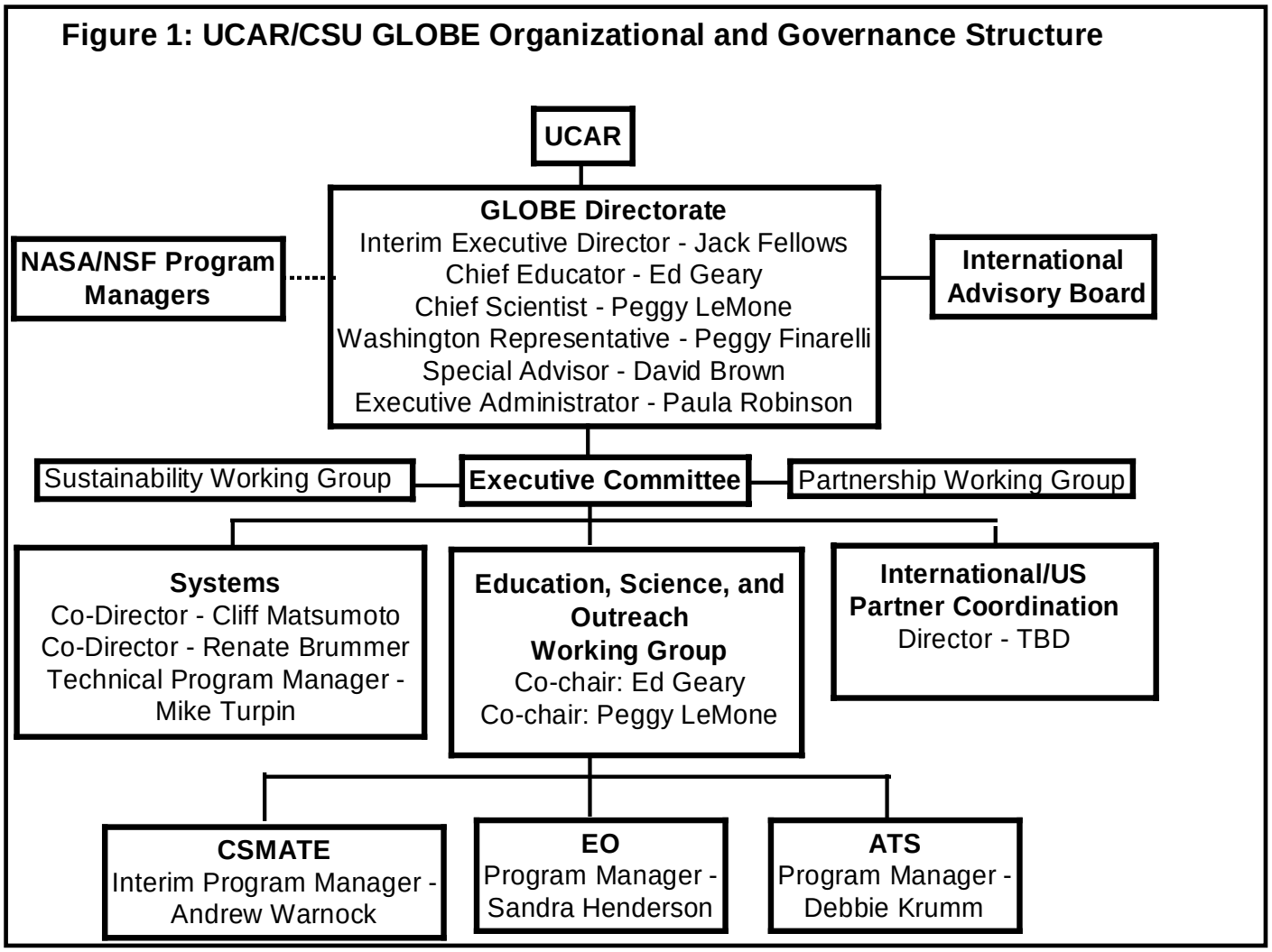
UCAR/CSU Roles

- Management. New headquarters for GLOBE is based in UCAR. Partnership management and program direction.
- Logistics. UCAR's Joint Office for Science Support has supported GLOBE logistics since the program's inception.
- Systems. CSU's Cooperative Institute for Research in the Atmosphere has supported GLOBE's website, databases, and all related functions since the program's inception.
- Science. CSU's Dept of Atmospheric Sciences is a GLOBE US Partner and has active GLOBE science investigators. UCAR is providing the Chief Scientist.
- Education. CSU's Center for Science, Math, and Technology Education and UCAR's Office of Education and Outreach bring extensive expertise in teacher training, curriculum development, equity and diversity, education standards, and distance learning.



Science, Education, Partnerships – Integrated!

Figure 1: UCAR/CSU GLOBE Organizational and Governance Structure



GLOBE Executive Team

- Dr. Jack D. Fellows, Interim Executive Director. Jack is a Vice President in UCAR and has a long history of managing national and international science and education programs. He was involved in the creation of GLOBE in the early 1990s.

- Dr. Edward Geary, Chief Educator. Ed is the Director of CSMATE and a Professor of Earth Resources at CSU. He brings to GLOBE a long history of leadership and innovation in geosciences education.

- Dr. Margaret LeMone, Chief Scientist. Peggy has been involved in atmospheric science for 30 years and involved in educational outreach, including serving on one of GLOBE's early advisory boards.

- Mr. David Brown, Chief Technologist and Senior Advisor. Dave has been involved with GLOBE since 1994, most recently as Director for Systems. His background is in digital communications, information theory, and science data management.

GLOBE Executive Team

- Ms. Peggy Finarelli, Washington Representative. Peggy will support GLOBE in Washington, DC. She was GLOBE's first Associate Director for International Relations and its Deputy Director from 1995-2000.

- Dr. Cliff Matsumoto, Systems Director. Cliff is the Associate Director of CIRA and has been responsible for managing GLOBE's systems team since 1997.

- Ms. Karyn Sawyer, Interim International Program Director. Karyn is Director of JOSS and has been involved in GLOBE activities since the beginning of the program.

- Ms. Paula Robinson, GLOBE Executive Administrator. Paula has organized the logistical and administrative support of GLOBE events since 1995 as a member of the JOSS team.

GLOBE Mission and Features

Mission. GLOBE is a science and education program that brings together students, teachers, and scientists to:

- Enhance environmental awareness of individuals throughout the world
- Contribute to scientific understanding of Earth
- Support improved student achievement in science and mathematics

Features:

- Take GLOBE environmental measurements using scientific protocols
- Report observations to the GLOBE database via the internet
- Study Earth science topics using GLOBE data, maps, and graphs and other GLOBE educational materials

We Support these!

Amazing and Unique Global Perspective and Opportunity

Philosophy

- GLOBE Mission. Firmly committed to the GLOBE mission.
- Partnerships. GLOBE is widely recognized around the world as an outstanding science and education partnership program. Partnerships are critically important to the program and we plan to improve and expand them!
- Integrating Science and Education. Continued students, teachers, and scientists involvement:
  - at all grade levels
  - in real scientific investigations that enhance classroom learning, and
  - increasing our understanding of local, regional, and global environmental conditions.

Leadership

- Some of the current key GLOBE staff will join us and so will other scientists and educators with a long history of support for science and education programs.

- We deliberately left some of the key positions open to bring a balance of long-term institutional knowledge, fresh ideas, and new energy to GLOBE. For example:
  - an international search is underway for the GLOBE Executive Director and for International Advisory Board members.
  - recruitment is also underway for the Director of International/US Partner Coordination and partnership specialists.

New Directions

- International Advisory Board. Guidance for Program's future, emphasis on GLOBE growth (fundraising and partnerships).
- Fund Raising. Work with government agencies, corporations, foundations, and other sources to expand and enhance GLOBE.
- Community Planning. Seek broad community input at periodic community meeting (2004 Boulder, Colorado).
- GLOBE Learning Communities (GLCs). Build on current efforts to create local, regional, national, and international learning communities, emphasis on improving data reporting.

New Directions

- Training Model. Customer-based model responsive to partner needs, emphasis on pre- and post-training support.
- Classroom Integration. Tools and materials that support the integration of GLOBE measurements and science inquiry techniques into the classroom.
- Distance Learning. Support for protocol training, GLOBE implementation, teacher professional development, and partner support.
- Educational Technology. Employ emerging web and multimedia technologies, GIS strategies, and distance learning tools, while continuing to support users at all technology levels.
- Field Campaigns. Opportunities for scientists, students, and educators to work together on projects of direct relevance to specific GLOBE communities.

Questions

- Will UCAR/CSU continue to support the GLOBE activities?
  - Our plan is to continue most of GLOBE's key activities, including partnerships and training.
  - Program stability is very important to us, particularly over the next 6-12 months.
  - We will need/want to do some things differently. Hope to enhance the program through extensive fundraising.
  - We plan to get community input on best directions for the future during the first year.

Questions

- Should I be concerned that GLOBE will no longer be a US Government program?
  - NASA will still provide long-term funding for GLOBE and oversee international agreements. GLOBE remains an important element in NASA's Earth Science education effort.
  - The new arrangement provides more funding stability (i.e., not multi-agency -- NOAA, NASA, EPA, etc.).
  - Dixon Butler will remain the NASA lead and part of the Team charting the future of the Program.
  - The National Science Foundation will also continue to fund GLOBE Science and Education investigators.
  - Being outside the government will allow more flexibility in our policies, partnerships, and fundraising opportunities.

Questions

- Will I still interact the same way with GLOBE?
  - Yes, some faces may change, but the ways you interact with GLOBE will remain largely the same (website content, training, partner support, HelpDesk, data reporting, etc).
  - The GLOBE Program office will move to UCAR in Boulder, Colorado – the move should be transparent to most GLOBE participants.

Thank You

- GLE Thank You. We would like to thank the GLE organizers and host for an outstanding week.
- Thank You. We want to acknowledge the outstanding efforts of the GLOBE staff, GLOBE Partners in the US and around the world, NASA, NSF, NOAA, EPA, and other US federal agencies.
- Communications. We will communicate with you regularly (web, email, the GLOBE Offline newsletter, telephone, workshops, etc). For more information, see the new UCAR/CSU GLOBE website:

http://www.globe.gov/newGLOBEteam

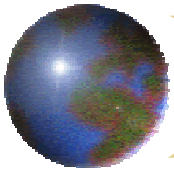
Thank You and Questions

UCAR

- Mission: "To extend the capabilities of the university community to understand the behavior of the atmosphere and related systems; and to foster the transfer of knowledge and technology for the betterment of life on earth". Six goal areas:
  - Science
  - Research Infrastructure
  - Education & Training
  - Advocacy, Public Policy, and Communications
  - Technology Transfer
  - Research and Operational Partnerships

- Organization:
  - Structure. Non-profit consortium formed in 1959.
  - Membership. 66 North American universities with atmospheric or related doctorate programs. Also 20 Academic Affiliates and 38 International Affiliates – bringing 124 universities to GLOBE!
  - Governance. 132 Member Representatives (2 from each of the 66) who elect 16 Trustees.

University Corporation for Atmospheric Research



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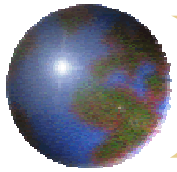
Jack Fellows, Director

- Cooperative Program for Operational Meteorology Education and Training (COMET) — Timothy Spangler
- Constellation Observing System for Meteorology Ionosphere Climate (COSMIC) — Bill Kuo
- Digital Library for Earth System Education (DLESE) — Mary Marlino
- GPS Science & Technology Program (GST) — Randolph Ware
- Unidata — Mohan Ramamurthy
- Visiting Scientists Programs (VSP) — Meg Austin
- Joint Office for Science Support (JOSS) — Karyn Sawyer
- Nat'l SMETE Digital Library (NSDL) — David Fulker

Denotes President's Office 2/03



The GLOBE Program

UCAR Members

University of Alabama in Huntsville
University of Alaska
University at Albany,
State University of New York
University of Arizona
Arizona State University
California Institute of Technology
University of California, Davis
University of California, Irvine
University of California, Los Angeles
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University of Oklahoma
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Texas A & M University
University of Texas at Austin
Texas Tech University
University of Toronto
Utah State University
University of Utah
University of Virginia
University of Washington
Washington State University
University of Wisconsin- Madison
University of Wisconsin-Milwaukee
Woods Hole Oceanographic
Institution
University of Wyoming
Yale University
York University

International Affiliates

Australian National University, Canberra

Atmospheric Environment Service, Downsview, Ontario, Canada

Bureau of Meteorology Research Centre, Melbourne, Australia

Central Weather Bureau, Taipei

Centro de Ciencias de la Atmósfera, Mexico

Centro del Agua del Trópico Húmedo Para América Latina y El Caribe, Panama

City University of Hong Kong

Deutsche Forschungsanstalt für Luft und Raumfahrt, Oberpfaffenhofen, Germany

Forschungszentrum Jülich GmbH, Jülich, Germany

Hong Kong Observatory

Hong Kong University of Science and Technology

Instituto de Astrofisica de Canarias, Tenerife, Spain

Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing

Instituto Nacional de Pesquisas Espaciais (INPE), São José dos Campos, Brazil

International Meteorological Institute, Stockholm, Sweden

Instituto Geofìsico del Peru, Lima

Instituto Nacional de Meteorologìa, Madrid, Spain

Johannes Gutenberg-Universität, Mainz, Germany

Lanzhou Institute of Plateau Atmospheric Physics, Lanzhou, China

Macquarie University, North Ryde, Australia

Malaysian Meteorological Service, Kuala Lumpur

Manila Observatory, Philippines

Max-Planck-Institute for Meteorology, Hamburg, Germany

Meteorological Research Institute, Ibaraki, Japan

Meteorological Service of Catalonia, Barcelona, Spain

Monash University, Clayton, Australia

National Central University, Chung-Li, Taiwan

National Taiwan University, Taipei

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Russian Academy of Sciences, Moscow

Seoul National University, Korea

Tel Aviv University, Israel

Università degli Studi dell'Aquila, Italy

Universität Hamburg, Germany

Universität Köln, Germany

University of Manchester, England

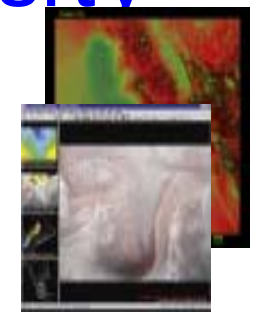
University of Nairobi, Kenya

University of Tokyo, Japan

Facilities and Tools

Colorado State University

- Cooperative Institute for Research in the Atmosphere (CIRA).
  - Local Weather Analysis and Prediction
  - Cutting-Edge GIS and Satellite Data Processing and Analysis
  - Information Systems and Visualization
  - Educational Outreach



- The Center for Science, Mathematics, and Technology Education (CSMATE).
  - Professional Development
  - Curriculum and Materials
  - Research on Teaching and Learning
  - Innovative Use of Technology

- Department of Atmospheric Science .
  - Training atmospheric scientists
  - Satellite data processing (e.g., CloudSat, ECMWF model output, MODIS, CALIPSO Lidar data, etc).